

Notice of Allowability

Application No.

10/076,704

Examiner

F. Lin Khoo

Applicant(s)

GOLAN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/13/2002.
2. ☒ The allowed claim(s) is/are 1-33.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

REASONS FOR ALLOWANCE

1. Claims 1-33 are allowable over the prior art.

The following is an examiner's statement of reasons for allowance: the prior art made of record does not teach in combination a method for provisioning a service node of a packet network that connects virtual private network (VPN) sites, said packet network comprised of a plurality of service nodes, each service node comprising at least one Provider Edge (PE) router and at least one Flow Record Processor (FRP), the method comprising the steps of: downloading a set of configuration files from a Matrix Generator (MG) server to the at least one FRP, said set of configuration files specifying measurement intervals for traffic matrixes which are to be generated, said traffic matrixes describing distributions of packet flows; uploading Border Gateway Protocol (BGP) and Route Distinguisher (RD) Tables from the at least one PE router to the at least one FRP; exporting flow records from the at least one PE router to the at least one FRP; receiving and processing said flow records at the at least one FRP; generating partial traffic matrixes at said at least one FRP; uploading partial traffic matrixes from the at least one FRP to the MG; computing a total traffic matrix for a measurement interval by summing the partial traffic matrixes for said measurement interval; determining whether the service node has adequate capacity based on the

traffic patterns established from the generated traffic matrixes; and if the capacity is not adequate, rerouting future flows to establish adequate capacity.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,450,408 to Phaal relates to partial traffic matrices used by a processing station for deriving topology features of a network obtained by monitoring devices which derive and store these partial traffic matrices themselves, the partial partial traffic matrices then being collected and passed to the processing station.

U.S. Patent No. 5,539,659 to McKee et al. relates to monitoring a network to collect data on entity traffic for a period of network operation, analyzing this data in respect of an entity operational characteristic by which the entities may be ordered into a ranking.

U.S. Patent No. 6,115,393 to Engel et al. relates to a monitor connected to a communication medium of the network for passively, and in real time, monitoring transmitted packets of different protocols and storing information about communications

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associated with the packets, the communications being in accordance with different protocols, and a workstation for receiving the information about the communications from the monitor and providing an interface to a user.

U.S. Patent No. 6,754,699 to Swildens et al. relates to a content delivery and global traffic management network system which provides distributed network traffic to content servers by load balancing requests among servers including cached content, traffic and server information gathering for up to date system status.

U.S. Patent No. 5,966,509 to Abe et al. relates to providing a network management device comprising traffic data acquisition means for acquiring traffic data possessed by network elements, storage means for storing the traffic data that has been acquired by the traffic data acquisition means, and network management execution means for executing processing that conforms to an operation relating to network management using the traffic data that has been acquired, and outputting results of processing, wherein the traffic data acquisition means acquires traffic data over a prescribed period of time for each management category of the managed object and stores this traffic data in the storage means in the form of a three-dimensional matrix structure.

U.S. Patent No. 6,339,595 to Rekhter et al. relates to a way for service provider to provide its customers the peer model's advantages by enabling transit P-routers to base their routing decisions for VPN-destined packets on packet fields that the transit routers interpret without reliance on VPN-specific routing information.

U.S. Publication 2002/0141343 to Bays relates to dynamic modification of routing policy based on such factors as current Internet performance, load sharing, user-defined parameters, and time of day.

U.S. Publication 2002/0118678 to Hamada a method of calculating transit traffic in a router including interfaces, a transit traffic matrix matching with the total number of subject interfaces whose transit traffic should be calculated is generated and initialized.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Lin Khoo whose telephone number is 571-272-5508. The examiner can normally be reached on flex time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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SUPERVISORY PATENT EXAMINER